



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/749,976

01/02/2004

Douglas H. Petit

1555-003

9680

26824

7590

12/07/2006

ALEX RHODES  
UNIT NO. 9  
50168 PONTIAC TRAIL  
WIXOM, MI 48393

EXAMINER

CHARLES, MARCUS

ART UNIT

PAPER NUMBER

3682

DATE MAILED: 12/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/749,976

Applicant(s)

PETIT, DOUGLAS H.

Examiner

Marcus Charles

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-12 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

This is the first action relating to serial application number 10/749,976 filed 01-02-2004.

Claims 1-12 are currently pending.

#### *Drawings*

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: In figs 3, there are no description for reference character (40) in the specification. In addition, figure 7 has a reference line depicting the pivot block with no reference character attached to the line. It appears the reference character (45) should be attached the line to depict the pivot block. Furthermore, it appears that the reference character "48" depicting the motor should be --44-- because the specification indicated the motor as "44" (see figs. 1, 3, 7 and 8). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

2. The disclosure is objected to because of the following informalities:

In page 3, line 15, the reference numeral "20" should be --21--.

In page 3, line 20, "37" should be --27--.

In page 4, line 6, the reference "46" should be --36--. The end cap is --36--.

In page 4, lines 7 and, the "spring seat" is --33-- and not "44".

In page 4, line 8, "treaded fasteners 48" should be --threaded fasteners 38--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3 and 9-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 9-10, respectively, "said push rod" and "said coupling apparatus" lack antecedent basis. In claim 3, "said tapered aperture" lacks antecedent basis.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3682

6. Claims 1-2, 4-7 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over in Smith (1,515,445) in view Cooney (1,870,711), Steffes et al. (4,922,749) and Chang (4,084,305). Cooney discloses an apparatus (fig. 1) for manually uncoupling a pulley. The apparatus comprising means for disengaging the pulley from a pulley shaft (B), a retractor member (1) attached to the pulley (A), a link (6) for causing the retractor to disengage the pulley. Smith fails to disclose the belt drive system have a tapered section. Steffes et al. discloses a belt drive (figs. 6-7) includes a tapered section extending from a power source (16) wherein the tapered section is coupling section between the pulley and the power shaft. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the coupling connection of Smith so that it comprises a tapered member in view of Steffes et al. in order to allow for the assembling and dismantling of the pulley with less force when using a single tool.

In addition, Steffes et al. also fails to disclose the tool is a toggle linkage. Chang discloses a toggle linkage (fig. 5) including a first pair of diverging toggle links (21), a second pair of toggle links (22) with end portions pivotally connected to the ends of the first pair diverging links, a sleeve (20) for pivotally mounting the pair of links for rotation about an axis; means (23/24) for operating the toggle linkage. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to replace the tool of Smith with a toggle linkage of Chang in order to reduce the force and time required to remove the pulley.

In claims 2, and 6-7, Smith in view of Chang inherently discloses the claimed invention.

In addition, regarding claims 4-5, the combination of Smith, Steffes et al. and Chang fail to disclose the angle of the taped section and the material from which the tapered member is made from. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the tapered section so that the angle is about 3 degrees, since it has been held that where the general conditions of the claim are disclose in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to make the tapered member out of aluminum, since it has been held that aluminum is a lighter material an is used in the art to reduce weight and it is within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a meter of obvious design choice. *In re Leshin*, 125 USPQ 416.

***Allowable Subject Matter***

7. Claims 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 3, 9-10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

**Conclusion**

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cooney (1,870,711), Somerville (5,167,057), Kiebler (6,266,860), Williams (6,665,918), Wilson (7,007,359) and Abdelmoula et al. (US 2001/0032385) disclose a pulley-removing tool. Reese et al. (4,826,467) and Dissert et al. (5,048,657) disclose a belt drive system with a tapered shaft coupling section.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus Charles whose telephone number is (571) 272-7101. The examiner can normally be reached on Monday-Thursday 7:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ridley Richard can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Marcus Charles*  
**MARCUS CHARLES**  
**PRIMARY EXAMINER**  
December 06, 2006